

September 24, 2003

To: Commissioner for Patents P.O.Box 1450 Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572 28 Davis Avenue Poughkeepsie, N.Y. 12603

Subject:

Serial No. 10/613,597 07/03/03

Beng Huat Chua

DIGITAL SWITCHING WIRELESS RECEIVER DIVERSITY AND BUFFER DIVERSITY FOR ENHANCED RECEPTION IN A WIRELESS DIGITAL AUDIO COMMUNICATION SYSTEM

Grp. Art Unit:

## INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty of disclosure under CFR 1.97-1.99 and 37 CFR 1.56. Copies of each document is included herewith.

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September  $\mathcal{U}$ , 2003.

Stephen B. Ackerman, Reg.# 37761

Signature/Date \_

- U.S. Patent 6,351,630 to Wood, Jr., "Wireless
  Communication System, Radio Frequency Communications System,
  Wireless Communications Method, Radio Frequency Communications
  Method, and Backscatter Radio Frequency Communications System,"
  describes a wireless communications system having transponder
  coupled to one of multiple selectable antennas.
- U.S. Patent 6,272,190 to Campana, Jr., "System for Wireless Transmission and Receiving of Information and Method of Operation Thereof," provides a system and method for wireless transmission and receiving of information.
- U.S. Patent 6,185,258 to Alamouti et al., "Transmitter Diversity Technique for Wireless Communications," teaches a transmitter diversity technique for wireless communications.
- U.S. Patent 6,181,749 to Urabe et al., "Diversity Reception Apparatus," details a diversity receiver.
- U.S. Patent 6,088,407 to Buternowsky et al., "Digital Diversity Receiver System," describes a digital diversity receiver system employing one or more transmitters, a plurality of receivers, and at least one two-way personal paging unit or pager.

- U.S. Patent 5,799,042 to Xiao, "Wireless Digital Communication System, a Radio Apparatus, A Digital Speaker, and a Digital Speaker Controlling Apparatus," describes wireless digital communication systems that apply an antenna diversity scheme to combat fading in a received radio system having a single receiver front-end.
- U.S. Patent 5,073,900 to Mallinckrodt, "Integrated Cellular Communications System," provides a cellular communications system using spread spectrum system with code division multiple access (CDMA), and employing forward error correction coding (FECC) to enhance the effective gain and selectivity of the system.
- U.S. Patent 4,517,669 to Freeburg et al., "Method and Apparatus for Coding Messages Communicated Between a Primary Station and Remote Stations of a Data Communications System," describes a method and apparatus for coding messages communicated between a primary station and remote stations of a data communications system.

"Interference Cancellation using Antenna Diversity for EDGE - Enhanced Data Rates in GMS and TDMA/136," Bladsjo et al., Proceeding Vehicular Technology Conf., 1999, pp. 1956-1960, vol. 4, discusses the evaluation of EDGE (enhanced data rates for global evolution).

FS-01-003

An English translation of the Abstracts of the following two Foreign Patents is enclosed:

Japanese Patent Laid-Open No. 4-8031 JP4008031 (Hiroyuki), describes a reception diversity system, which generates an error correcting signal indicating the correction every time received data is corrected.

Japanese Patent Laid-Open No. 1-265739 JP1265739, (Kiyoyuki, et al.), provides a system for minimizing the effect of reception level fluctuation and phase fluctuation due to fading.

"Cochannel Interference Suppression Through Time/Space Diversity," Calderbank, et al., IEEE Transactions on Information Theory, May 2000, Vol: 46, Issue: 3, pp. 922-932, discusses wireless systems that are subject to a time-varying and unknown a priori combination of cochannel interference, fading, and Gaussian noise.

Sincerely

Stephen B. Ackerman,

Reg. No. 37761

lof1

Form PTO-1449									Doctor (Humber (Continus)	1 .,	Li co		1
			ΛN	ыc	20	۱ ر	SURE C	ITATION	FS-01-003		1613,		
/0		יננג או	VIV N N	VIS VIS	opi	L(	CATION	ITATION	LOSACONI Beng Huat Chua				
IN AN APPLICATION  SEP 29 2003 (Usage broad showls if nocossary)									FMng Dam 07/03/	03 0	DAN TYY COO		
SEP	(036		701Ш :		13 11	1100		II C' DATE	NT DOCUMENTS			<del></del>	
70-00	TEST C	Z				_Ţ		0. 3. PAIL		CLUES	MACHT	משטת	
CONTRACT NOT NOT NOT NOT NOT NOT NOT NOT NOT NO	₽50 		ונאדו	<del>,</del>	0 E N	'	DATE		NUME .		200000	א איייתסו	71404
	6	3	51	10	3	0	2/26/02	Wood	Jr	455	101	424	01
	í	- 1	1	1	1	- 1		•	<b>T</b>	375	347	aliol	98
	{	- 1	1	1	1	Į.	8/7/01	Campa	1			5/7/	
	6	1	8/5	2	5	8	2/6/01	Alamo	outietal.	375	260	1	
	6	1	81	7	4	9	1/30/01	Urabe	et al.	375	267	10/20	1198
	(,		8 8	4	5	7	7/11/00	Buterr	rowsky et al.	375	347	9/11	198
							, ,	. ,		375	285	10/16	Jas
		1 1	- 1		1 1		8/25/98		1 14 .		,	3/19	1
	5	0	7 3	9	0	٥	12/17/91		ckrodt	375		1 1	
·	4	5	17	عال	عا	9	5/14/85	Freebu	urg et al.	370	82	17/4	<u>83</u>
			.						J				
				┪	1							:	
	-	-		+	$\vdash$	-					-	1.	
	<u></u>	L	<u>.                                    </u>	$\perp$	_			7005101101	TOUT DOOLULEUT			<del></del>	
						٠	<del></del>	FOREIGN PA	TENT DOCUMENT		T	Translat	
•	$\infty$	CU	EHT.	HUH	BEL	١	OUTE	, co	יייי איזאע 	CUSS	SUBCLASS	YES	М
70	41		A 8	20	3	1	1/13/92	Ta 00 44		HO4L	1 /06		
		_			_	_				HOYL	,		
JP	1	2	63	1	3	1	10/23/89	Jagar	<u> </u>	11040	11/02	-	
												-	
		-		1	1								
		1_		_1_		1_	1	OTHER DOC	CUMENTS (Induation A	ursor, True.	Dale, Peruner	x Pagos, Elc	 :.)
	1	11		1			1 -					- /·	Saa
_	<u> </u> -	-	<u>ره ب</u>	<u>ch</u>	a	N.	nel In	Terreren	ce Suppressio		_	IMEL	7/00
		1	لمرح	ec	si	$\mathcal{F}$	, A.R	Calderb	eank et al.,	TEEE.	Trans	· 0n	tot
		4	Th.	۰.	. د س	_	ا امار	6, No.3,	May 2000, 8	0. 92	2-932		
	-	n		<u>دت</u> ا	<u> </u>	<del>)</del>	1000		) ' '	ý 7	. No	المحمد	$\mathcal{L}$
	1	+	نهل	1	<u>e(</u>	+	erence	2 Cancel	lation using	HATEM	na Ui	101317	, The
		1	EDY.		_	-{	Enhan	ced Data	- Rates in GS	SM and	MOT !	A/136	2
		_ b	را د ار	<del>ت</del> ا		,	4	10	Vehicular Tee	1. Ca	f. 1990	· Value	į
Symmen		_\\	) (Q	- A	<u>5</u>	کر	1960.	x. ILOC.	DATE CONSIDERED	m. w	<del>~ )</del> (	-J-WILL	<del></del>
EXAMMER			۲۲.	4-13	. <b>U</b>		,						
											L COOL Deau		

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.